



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/761,874

01/21/2004

Terrance L. Bescup

59486US002

3143

32692

7590

02/10/2009

3M INNOVATIVE PROPERTIES COMPANY

PO BOX 33427

ST. PAUL, MN 55133-3427

EXAMINER

BASHORE, ALAIN L

ART UNIT

PAPER NUMBER

1792

NOTIFICATION DATE

DELIVERY MODE

02/10/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com

LegalDocketing@mmm.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/761,874	<b>Applicant(s)</b> BESCUPE ET AL.	
	<b>Examiner</b> Alain L. Bashore	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,4-7,9-22,24,26-32 and 34-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,9-22,24,26-32 and 34-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Applicant is advised that the Notice of Allowance mailed 12-24-08 is vacated. If the issue fee has already been paid, applicant may request a refund or request that the fee be credited to a deposit account. However, applicant may wait until the application is either found allowable or held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a specified Deposit Account.

2. The previous rejection of record is hereby re-instated and reasons for allowance withdrawn. Comments on statement of reasons for allowance filed 12-30-08 are considered moot.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-7, 9, 13-14, 21-22, 24, 26-30, 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmquist et al ('196) in view of Richart et al.

Palmquist et al discloses a method of making retroreflective elements. A plurality of core particles is provided, and coating of the particles with an unsolidified polymeric composition forming coated particles this then performed. The coated particles with optical elements is combined (by mechanical mixing) such that optical elements are embedded in the unsolidified polymeric composition and solidifying the polymeric composition forming retroreflective element. There is separating of the retroreflector elements from the unembedded optical elements (col 3, lines 1-73; col 4, lines 27-36).

Plamquist et al discloses crushed greystone rock that is coated with resin which is then given a degree of tackiness after which it is combined with glass beads. The beads are embedded in the resin/greystone, all of which is then solidified (col 3, lines 5-73).

Regarding specific core particle type and size ranges, refractive index ranges, the reference to Palmquist discloses variable particles, such that one with ordinary skill in the art would utilize any specific type and size for specific application in absence of criticality of results.

Palmquist et al does not explicitly disclose a continuous process or where the combining further includes mechanical mixing further with at least one rotating mixing member further being a disc.

Richart et al discloses a continuous process for coating particles including use of a rotating member further being a disc (see col 3, lines 33-39; col 5, lines 28-40), and use of a high force field because of the disclosed use of electrostatic coating (col 4, line 58).

It would have been obvious to one with ordinary skill in the art to include a continuous process for coating particles including the use of a rotating member further being a disc because Palmquist et al discloses coating particles, and that a continuous process is more efficient than a batch process per se in engineering generally.

It would have been obvious to one with ordinary skill in the art to utilize a high force field because the use of electrostatic coating is generally known as an efficient coating technique.

5. Claims 10, 12, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmquist et al ('196) in view of Richart et al as applied to claims

Art Unit: 1792

above, and further in view of Ajax LynFlow Continuous Mixer Reference (LynFlow reference).

Palmquist et al ('196) and Richart et al do not disclose the mixing member being an extruder screw, at least two co-rotating or counter-rotating mixing members. Further is the recitation of claim 32.

The LynFlow reference discloses a mixing member being an extruder screw or at least two co-rotating or counter-rotating mixing members (see page 1).

It would have been obvious to one with ordinary skill in the art to include a mixing member being an extruder screw or at least two co-rotating or counter-rotating mixing members, or the recitation of claim 32, because the LynFlow reference teaches advantageous per se "(see paragraphs under "the principle" section).

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palmquist et al ('196) in view of Richart et al as applied to claims above, and further in view of Eirich et al.

Palmquist et al ('196) and Song et al do not disclose the mixing member comprising a grinding plate.

Eirich et al discloses a mixing member comprising a grinding plate (see fig 1).

It would have been obvious to one with ordinary skill in the art to include a mixing member comprising a grinding plate because Eirich et al teaches advantages of a grinding plate (col 1, lines 30-31).

7. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmquist et al ('196) in view of Richart et al as applied to claims above, and further in view of Lange ('469).

Palmquist et al ('196) and Richart et al do not disclose optical elements as microcrystalline beads as glass-ceramic beads or non-vitreous beads.

Lange discloses optical elements as microcrystalline beads as glass-ceramic beads or non-vitreous beads (col 1, lines 28-68; col 2, lines 1-53).

It would have been obvious to one with ordinary skill in the art to include optical elements as microcrystalline beads as glass-ceramic beads or non-vitreous beads because Lange teaches durability.

8. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmquist et al ('196) in view of Richart et al as applied to claims above, and further in view of Schleifstein.

Palmquist et al ('196) and Richart et al do not disclose an adhesion promoting agent, or a floatation agent that further is a flurochemical.

Schleifstein discloses an adhesion promoting agent, and a floatation agent that further is a flurochemical (col 3, lines 65-67; col 4, lines 1-54).

It would have been obvious to one with ordinary skill in the art to include an adhesion promoting agent, and a floatation agent that further is a flurochemical because Schlesifstein teaches advantages for promoting characteristics of floatation and adhesion.

### ***Response to Arguments***

9. Applicant's arguments filed 10-29-08 have been fully considered but they are not persuasive.

Palmquist discloses a method of making retroreflective elements comprising providing a plurality of particles (10); coating the particles with a unsolidified crosslinkable polymeric composition (polyamide/epoxy), mechanically mixing the coated particles with optical elements (12) in a process by means of a least one rotating mixing



member (tumbling in a mortar mixer; col. 4, line 20) such that the elements are embedded in the composition; and curing the polymeric composition (col. 4, line 32).

Plamquist discloses curing and an unsolidified precursor composition that is crosslinkable, therefore applicant's amendment is not persuasive in overcoming the rejection of record and new claims 34-36 is disclosed to Plamquist.

### ***Conclusion***

**10. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action for claim 32. See MPEP § 706.07(a).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alain L. Bashore whose telephone number is 571-272-6739. The examiner can normally be reached on about 7:00 am to 4:30 pm (Mon. thru Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alain L. Bashore/  
Primary Examiner, Art Unit 1792